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THE

Journal of the Society of Arts,

AND OF

THE INSTITUTIONS IN UNION.

111TH SESSION.] FRIDAY, APRIL 14, 1865. [No. 647. VOL. XIII.

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Announcements by the Council.

ORDINARY MEETINGS.

Wednesday Evenings at 8 o'clock.

APRIL 19.—"On the Preservation of Natural History Specimens for Museum Purposes." By B. WATERHOUSE HAWKINS, Esq., F.G.S.

APRIL 26.—"On the Wear and Tear of Steam-Boilers." By F. A. PAGET, Esq.

CANTOR LECTURES.

The Third Course for the present Session will consist of six Lectures "On Some of the Most important Chemical Discoveries made within the last Two Years," to be delivered by Dr. F. CRACE CALVERT, F.R.S, F.C.S. (Corresponding Member of the Royal Academy of Turin; of the Société Industrielle de Mulhouse; of the Société Imperiale de Pharmacie de Paris, &c.), on Tuesday evenings, at Eight o'clock, as follows:—

APRIL 18TH.—LECTURE 2.—On the Discoveries in Chemistry applied to Arts and Manufactures (*continued*).

APRIL 25TH.—LECTURE 3.—On the Discoveries in Agricultural Chemistry.

MAY 2ND.—LECTURE 4.—On the Discoveries in Physiological Chemistry.

MAY 9TH.—LECTURE 5.—On the Discoveries in the Chemistry of Rocks and Minerals.

MAY 16TH.—LECTURE 6.—On the Discoveries in the Chemistry of Metals and Alloys.

These Lectures are free to Members (without ticket), and every Member has the privilege of admitting ONE Friend to each Lecture.

PRIZES FOR ART-WORKMEN.

The Worshipful Company of Salters contribute £10 annually to this Prize Fund.

The Council of the Society of Arts hereby offer prizes for Art-Workmanship, according to the following conditions:—

I. The works to be executed will be the property of the producers, but will be retained for exhibition, in London and elsewhere, for such length of time as the Council may think desirable.

II. The exhibitors are required to state in each case the price at which their works may be sold, or if sold previously to exhibition, at what price they would be willing to produce a copy.

III. The awards in each class will be made, and the sums specified in each class will be paid, provided the works be considered of sufficient merit to deserve the payment; and, further, in cases of extraordinary merit additional awards will be given, accompanied with the medal of the Society.

IV. Before the award of prizes is confirmed, the candidates must be prepared to execute some piece of work sufficient to satisfy the Council of their competency.

V. *Bona-fide* Art-workmen only can receive prizes.

VI. All articles for competition must be sent in to the Society's house on or before Thursday, the 14th of December, 1865, and must be delivered free of all charges. Each work sent in competition for a Prize must be marked with the Art-workman's name, or, if preferred, with a cypher, accompanied by a sealed envelope giving the name and address of the Art-workman. With the articles, a description for insertion in the catalogue should be sent.

VII. Although great care will be taken of articles sent for exhibition, the Council will not be responsible for any accident or damage of any kind occurring at any time.

VIII. Prices may be attached to articles exhibited and sales made, and no charge will be made in respect of any such sales.

IX. All the prizes are open to male and female competitors, and in addition, as regards painting in porcelain, decorative painting, and wall mosaics, a second set of prizes, of the same amounts, will be awarded among female competitors. If a female desire to compete in the female class only, she must declare her intention accordingly. The originals of the works prescribed may be seen at the South Kensington Museum, in the gallery at the entrance of the Sheepshanks pictures.

Casts may be seen at the Society of Arts, Adelphi, London, and the Schools of Art at Edinburgh, Dublin, Manchester, Glasgow, Birmingham, and Hanley in the Potteries.

Photographs, chromolithographs, engravings, rough casts in metal, &c., may be purchased at the Society of Arts, John-street, Adelphi, at the prices named.

The plaster casts may be obtained from Mr. D. Brucciani, 39, Russell-street, Covent-garden, W.C.

*** The Council are happy to announce that several of the works which received first prizes in the competitions of 1863, 1864, and 1865 have been purchased by the Department of Science and Art, to be exhibited in the South Kensington Museum and the Art Schools in the United Kingdom.

1st Division.

Works to be Executed from Prescribed Designs.

For the successful rendering of the undermentioned designs in the various modes of workmanship according to the directions given in each case.

Class 1.—Carving in Marble, Stone, or Wood.

(*a.*) *The Human Figure.*—One prize of £15 for the best, and a second prize of £7 10s. for the next best, work executed in marble or stone, after the Boy and Dolphin cast from a chimney-piece, ascribed to *Donatello*. Original in the South Kensington Museum, No. 5,896. Dimensions to be one-eighth less than the cast (linear).—This design may be adhered to strictly or adapted to any architectural purpose.

[Cast—Fifteen shillings; Photograph—One shilling.]

(*b.*) *Ornament.*—One prize of £10 for the best, and a second prize of £5 for the next best work, executed in marble, stone, or wood after a carved chair-back in the South Kensington Museum. Dimensions to be two-thirds of the cast (linear).

[Cast—Twelve shillings. Photograph—One shilling.]

(*c.*) *Ornament.*—One prize of £10 for the best, and a second prize of £5 for the next best, work executed in stone, after a *Gothic bracket* in the Architectural Museum. Dimensions the same as the cast. In this design the details may be improved by the introduction of small animals, and the human head may be changed according to the taste of the art-workman.

[Cast—Ten shillings; Photograph—One shilling.]

(*d.*)—One prize of £20 for the best, and a second prize of £10 for the next best, work carved in *wood* after a design by *Holbein*, as an *Inkstand* or *Watch-Holder* on three feet. Dimensions optional.

[Wood Engraving—Sixpence.]

(*e.*)—One prize of £15 for the best, and a second prize of £7 10s. for the next best, work carved in wood after the *Head of a Harp* of the period of Louis XVI., in the South Kensington Museum, No. 8,531. The head and bust only need be fully completed. Dimensions the same as the cast.

[Cast—Thirty shillings; Photograph—One shilling.]

(*f.*) *Ornament.*—One prize of £10 for the best, and a second prize of £5 for the next best, work carved in wood after an *Italian picture frame* in the possession of Henry Vaughan, Esq. Dimensions optional.—This design may be adhered to strictly or adapted in such manner as the workman may think fit.

[Photograph—Two shillings.]

(*g.*) *Ornament carved and gilt.*—One prize of £10 for the best, and a second prize of £5 for the next best, work executed in wood, carved and gilt after a *Console Table* in the South Kensington Museum, No. 6947, of the period of Louis XVI. The work to be carved roughly in wood, then to be prepared in the white by a gilder, then cut up or carved in the white by the carver, then to be gilt in mat and burnished gold. As such work may probably be executed by two persons, the prize will be apportioned as the judges may determine.

[Photograph—One Shilling.]

Class 2.—Repoussé Work in any Metal.

(*a.*) *The Human Figure as a bas-relief.*—One prize of £10 for the best, and a second prize of £5 for the next best, work executed after *Raphael's "Three Graces."* Dimensions—The figures to be six inches high.

[Photograph—One shilling.]

(*b.*) *Ornament.*—One prize of £5 for the best, and a second prize of £3 for the next best, work executed after a Tazza in silver, date 1683, the property of Sir W. C. Trevelyan, Bart., now in the South Kensington Museum. Dimensions—The same as the model.

[Photograph—One shilling.]

Class 3.—Hammered Work, in Iron, Brass, or Copper.

Ornament.—One prize of £7 10s. for the best, and a second prize of £5 for the next best, work executed after the portion shown in the photograph of the Pediment of a Gate (German work, date about 1700) in the South Kensington Museum, No. 5,979. To be adapted for use as a bracket. Dimensions—Twelve inches deep.

[Photograph—One shilling and threepence.]

Class 4.—Carving in Ivory.

(*a.*) *Human Figure in the round.*—One prize of £15 for the best, and a second prize of £10 for the next best, work executed after a miniature statuette (Italian), No. 304 in the South Kensington Museum; dimensions—the same as the cast; or after a medallion portrait of Flaxman, by himself, No. 294 in the South Kensington Museum; dimensions—to be reduced in height by one-half (linear).

[Cast—One shilling.]

(*b.*) *Ornament.*—One prize of £7 10s. for the best, and a second prize of £5 for the next best, work executed after a pair of *Tablets*, in the possession of John Webb, Esq. Dimensions—The same as the cast.

[Cast—One shilling.]

Class 5.—Chasing in Bronze.

(*a.*) *The Human Figure.*—One prize of £10 for the best, and a second prize of £5 for the next best, work executed after a reduced copy of "*Clytié.*" A rough casting in bronze, on which the chasing must be executed, will be supplied by the Society at cost price—£2 10s.

[Plaster Cast—Three shillings and sixpence.]

(*b.*) *Ornament.*—One prize of £10 for the best, and a second prize of £7 10s. for the next best, work executed after *Goutier*, from a cabinet in the possession of Her Majesty the Queen. A rough casting in bronze, on which the chasing must be executed, will be supplied by the Society at cost price—3s. 6d.

[Plaster Cast—One Shilling.]

Class 6.—Etching and Engraving on Metal—Niello Work.

Ornament.—One prize of £10 for the best, and a second prize of £5 for the next best, work executed after arabesques by Lucas Van Leyden, A.D. 1528. No. 18,968 in the South Kensington Museum. To be engraved the height of the photograph, and, if round a cup or goblet, repeated so as to be not less than nine inches in length when stretched out.

[Photograph—Sixpence.]

Class 7.—Enamel Painting on Copper or Gold.

(*a.*) *The Human Figure.*—One prize of £10 for the best, and a second prize of £5 for the next best, work executed after *Raphael's design of the "Three Graces,"* executed in *grisaille.* Dimensions—The figures to be four inches high.

[Photograph—One shilling.]

(*b.*) *Ornament.*—One prize of £5 for the best, and a second prize of £3 for the next best, work executed after a German arabesque (16th century). No. 19,003 in the South Kensington Museum. Dimensions—The same as the Photograph.

[Photograph—Sixpence.]

Class 8.—Painting on Porcelain.

(*a.*) *The Human Figure.*—One prize of £10 for the best, and a second prize of £5 for the next best, work executed after *Raphael's "Two Children,"* in the cartoon of "*Lystra,*" Dimensions—the same as the Photograph. This work is to be coloured according to the taste of the painter.

[Photograph—Ninepence.]

(*b.*) *Ornament.*—One prize of £5 for the best, and a second prize of £3 for the next best, work executed after arabesques by Lucas Van Leyden, 1528, No. 18,968 in the South Kensington Museum, and coloured according to the taste of the painter. Dimensions—Double the size of the Photograph (linear).

[Photograph—Sixpence.]

N.B.—A second set of prizes of the same amount is offered to female competitors. See conditions, Section IX.

Class 9.—Decorative Painting.

(*a.*) *Ornament.*—One prize of £5, and a second prize of £3, for a work, executed after an *ornament,* from *Castel R. Pandino,* near Lodi, from a drawing in the South Kensington Museum, No. 1,150. Dimensions—length 4ft.—width, enlarged from the print in the same proportion.

[Coloured Print—One shilling.]

(*b.*) *Ornament.*—One prize of £5, and a second prize of £3, for a work, executed after a *picture frame,* in the South Kensington Museum, No. 7,820. Dimensions—5 feet by 3 feet 11½ inches, outside measure. The works to be executed on canvass, either with or without stretchers, in cool colours. Some lines of the mouldings may be gilt.

[Photograph—One shilling and sixpence.]

N.B.—A second set of prizes of the same amount is offered to female competitors. See conditions, Section IX.

Class 10.—Inlays in Wood (Marquetry, or Buhl), Ivory or Metal.

Ornament.—One prize of £5 for the best, and a second prize of £3 for the next best, work executed after a specimen in the possession of the Hon. John Ashley. Dimensions—one-third larger than the Lithograph (linear).

[Outline Lithograph—Sixpence.]

Class 11.—Cameo Cutting.

(*a.*) *Human Head.*—One prize of £10 for the best, and a second prize of £5 for the next best, work executed after *Wyon's* heads of the Queen and Prince Consort, on the Juror's medal of 1851.

(*b.*) *Animal.*—One prize of £10 for the best, and a second prize of £5 for the next best, work executed after *Wyon's* "*St. George and the Dragon,*" on the Prince Consort's medal. Dimensions the same as the casts.

[Casts—Sixpence each.]

Class 12.—Engraving on Glass.

Ornament.—One prize of £10 for the best, and a second prize of £3 for the next best, work executed after arabesques by Lucas Van Leyden, A.D. 1528. No. 18,968 in the South Kensington Museum. To be engraved the height of the engraving; and if round a glass or goblet, repeated so as not to be less than 9 inches long when stretched out.

[Photograph—Sixpence.]

Class 13.—Wall Mosaics.

Human Head.—One prize of 10 for the best, and a second prize of £7 10s. for the next best, work executed after *Bertini,* of Milan. A preparatory drawing must be made, coloured, after the lithograph, on which the lines and disposition of the tesseræ must be marked. The dimensions of the work should be regulated by the size of the tesseræ proposed to be used, which size may be left to the choice of the artist. Although desirable, it is not necessary to execute the whole subject in actual mosaic, but if a part only be done, the eye must be in such portion. A coloured drawing, with tesseræ, may be seen at the Society's house, and in the South Kensington Museum, and tesseræ of two sizes may be obtained from Messrs. Minton, Stoke-upon-Trent, Messrs. Maw and Co., Brosely, Shropshire, Messrs. Powell and Sons, Temple-street, Whitefriars, and Messrs. Jesse Rust and Co., Carlisle-street, Lambeth.

[Lithographic Outline Coloured—Two Shillings.]

N.B.—A second set of prizes of the same amount is offered to female competitors. See conditions, Section IX.

Class 14.—Gem Engraving.

(*a.*) *Human Head.*—One prize of £10 for the best, and a second prize of £5 for the next best, work executed after a cameo portrait of Savanarola, No. 7,541 in the South Kensington Museum. Dimensions—the same as the cast.

[Cast—Sixpence.]

(*b.*) *Full-length figure.*—One prize of £10 for the best, and a second prize of £5 for the next best, work executed after a small Wedgwood medallion, No. 5,827 in the South Kensington Museum. Dimensions—the same as the cast.

[Cast—Sixpence.]

Class 15.—Die Sinking.

Human Head.—One prize of £10 for the best, and a second prize of £5 for the next best, work executed after the head of the Prince Consort, by *Wyon,* on the Society's medal. Dimensions—half the size of the original (linear).

[Cast—Sixpence.]

Class 16.—Glass Blowing.

Ornament.—One prize of £7 10s. for the best, and a second prize of £5 for the next best, work executed after an original in the South Kensington Museum, No. 1,813. Dimensions—as given in the wood engraving.

[Engraving—Sixpence.]

Class 17.—Bookbinding and Leather Work.

(*a.*) *Bookbinding.*—One prize of £7 10s. for the best,

and a second prize of £5 for the next best, work executed in bookbinding, after an Italian specimen in the South Kensington Museum, No. 7,925. The work to be bound should be some classical author of the size given. Dimensions—the same as the photograph.

[Photograph—One Shilling.]

(*b.*) *Leatherwork.*—One prize of £7 10s. for the best, and a second prize of £5 for the next best, work of boiled and cut leatherwork for the outside covering of a jewel casket. Original in the South Kensington Museum, No. 7,768. Dimensions—one-half larger than the photograph (linear).

[Photograph—One Shilling.]

Class 18.—Embroidery.

Ornament.—One prize of £5 for the best, and a second prize of £3 for the next best, work executed, either after a German example in the Green Vaults at Dresden, or an Italian Silk in the South Kensington Museum, No. 7,468, which may be adapted to a screen. Dimensions—according to the taste of the embroiderer.

[Photograph—German, Sixpence; Italian, One Shilling.]

Class 19.—Illuminations.

Ornament.—One prize of £5 for the best, and a second prize of £3 for the next best, copy made from an Altar Card, attributed to Giulio Clovio, in the South Kensington Museum, No. 2,958, or from a MS. border, date 1450, No. 3,057, in the South Kensington Museum. Dimensions—one-half larger than the Photograph (linear).

[Photograph—Two Shillings.]

2nd Division.
Works to be Executed without Prescribed Designs.

Wood Carving.

(*a.*) *Human figure in the round, in alto or in bas relief. Animals or natural foliage may be used as accessories.* 1st prize of £25 and the Society's Silver Medal. 2nd prize of £15. 3rd prize of £10.

(*b.*) *Animal or still-life. Fruit, flowers, or natural foliage may be used as accessories.* 1st prize of £10. 2nd prize of £7 10s. 3rd prize of £5.

(*c.*) *Natural foliage, fruit, or flowers, or conventional ornament, in which grotesque figures or animals may form accessories, preference being given where the work is of an applied character for ordinary decorative purposes, as representing commercial value.* 1st prize of £10. 2nd prize of £7 10s. 3rd prize of £5.

(*By order*)
P. LE NEVE FOSTER, *Secretary.*

Proceedings of Institutions.

EXAMINATIONS, 1865.—LIST OF LOCAL BOARDS.

* The Boards marked thus have been formed this year.

Aberdeen.—Mr. W. Brebner, *Chairman;* Mr. H. Ambrose Smith; J. Cruickshank, LL.D., Prof. of Mathematics; J. S. Brazier, Prof. of Chemistry; R. Beveridge, M.D.; Messrs. W. Rattray, D. Maver, and P. Cleland. The above constitute the *working* Local Board. The following are also *ex-officio* members:—The Lord Provost of Aberdeen; the Senior Baillie of Aberdeen; the Dean of Guild, Aberdeen; John Manson; James W. Barclay, James Farquhar, John R. M'Kenzie, Baillie M'Hardy, Rev. J. Longmuir, LL.D.; Messrs. J. Duguid Milne, J. Miller, James Matthews, W. Ramage, T. Melville, W. Fraser, J. Berry, A. D. Milne, J. Bulloch, J. Grey, R. Leys, and J. Sinclair, Mechanics' Institution, Aberdeen, *Secretary.*

Aldershot and Farnham.—Capt. E. E. Mangles, *Chairman;* Messrs. W. H. Bayley, R. O. Clarke, Dewdney, B.A.; Sir C. W. Dilke, Bart.; Messrs. F. Eggar, T. Fabian, J. Grant; Dr. T. R. Jameson, M.D.; Mr. W. Ker; Rev. S. C. Morgan, M.A.; Capt. G. Newcome, J.P.; Messrs. B. Nichols, H. Poppleton, L.C.P.; E. Powell, S. Redgrave, Rev. Dr. Rule, Mr. J. Seymour, Dr. J. Shoolbraid, M.D.; Messrs. Sloman, C. Stroud; the Ven. Archdeacon Utterton; Messrs. T. White, T. Wonnacott, W. Hollest, *Treasurer,* and Barrow Rule, Classical and Mathematical School, Aldershot, *Secretary.*

*Alton.—William Curtis, Esq., *Chairman;* Messrs. W. Curtis, jun., Samuel Bickerton, Edwin Williams, and John Bryant, *Secretary.*

Ashford.—Revs. J. P. Alcock and R. H. Wright, M.A.; Messrs. J. J. Cudworth, R. C. Mansell, T. H. Vie, J. Keener, R. Rabson, F. Garaway, and Thomas Nesbit, 3, Dover-place, Ashford, *Secretary.*

Banbridge (Ireland).—Messrs. W. Waugh, J.P., *Chairman,* R. M'Clelland, *Vice-Chairman,* J. W. M'Master, J.P., D. Leonard, J. Hawthorn, M.D., J. Smith, jun., C.E., G. G. Tyrrell, W. Walker, G. F. Long, H. Finlay, J. Noble, H. Glass, T. Connor, and Alex. Black, (*Hon. Sec.* Literary and Mutual Improvement Society), *Secretary.*

Banbury.—Rev. H. Back, *Chairman;* Messrs. T. W. Barrows, T. Beesley, F.C.S., R. H. Brooks, W. Johnson, F.R.A.S., D. Pidgeon, and R. H. Rolls; Rev. T. Russell, M.A.; Messrs. A. B. Rye, F.R.C.S., J. Stockton, and J. H. Beale, *Secretary.*

Barnet.—Revs. F. C. Cass, M.A., *Chairman;* T. R. White, M.A., and J. D. Bell; Messrs. C. T. Carter, S. J. Baldock, W. Baldock, and John Thimbleby, *Secretary.*

Belfast.—Mr. J. J. Murphy, *Chairman;* Revs. J. S. Porter, H. Hanna, T. L. Hanson, and S. Fawcet; Messrs. T. M'Clinton, C. Rennie, T. Morrison, W. T. Matier, T. J. M'Conkey, and F. A. Maitland, *Secretary.*

Birmingham and Midland.—The Right Hon. Lord Wrottesley, *Chairman;* the Rev. J. C. Miller, D.D.; Mr. Thomas Martineau, and Mr. Robert Wright; the Rev. Charles Evans, M.A., and the Rev. Chancellor Law; the Right Hon. C. B. Adderley, M.P.; Henry Wiggin, Esq., Mayor of Birmingham; Mr. Alderman Ryland, and Mr. Alderman Sturge; Mr. Councillor Avery, and Mr. Councillor Jacob Phillips; Messrs. W. C. Aitken, J. H. Chamberlain, J. B. Gausby, J. B. Hebbert; T. P. Heslop, Esq., M.D.; John Jaffray, Wm. Kenrick, Wm. Mathews, jun., M.A., C. E. Mathews, T. P. Salt, Geo. Shaw, F.G.S., Geo. Embrey, Samuel Grove; Edwin Smith, Birmingham and Midland Institute, Birmingham, *Secretary.*

Bishops' Stortford.—Rev. T. T. L. Bayliff, M.A., *Chairman;* Mr. J. Bell, M.A.; Rev. W. J. Copeland, B.D.; Mr. E. M. Dillon, M.A.; Revs. G. Goodman, J. Menet, M.A.; Messrs. G. A. Starling, M.D., L.R.C.P., and F. W. Nash, B.A., Birchanger, Bishops' Stortford, *Secretary.*

Blandford.—Messrs. S. Abbott, *Chairman,* E. Fisher, W. E. Groves, and J. B. Green, *Secretary.*

Bradford.—Rev. D. Fraser, LL.D., *Chairman;* Messrs. T. Clark and D. J. Crebbin; Rev. S. G. Green, B.A.; Messrs. Godwin, J. Hanson, J. Hey, J. M. Jaques, Law, and C. Lund; Rev. W. Mitton; Mr. J. T. Newboult; Rev. W. C. Shearer; Messrs. S. Smith and A.

Smith; H. Harrison and C. Hey; and J. Simpson, Mechanics' Institute, *Secretary*.

Brighton, for Sussex.—The Mayor of Brighton, *Chairman;* Mr. J. White, M.P.; Mr. H. Moor, M.P.; Messrs. W. Furner, A. Bigge, D. Black, J. Buchanan; Rev. J. W. Cary, D.D.; Mr. H. Elphinstone, M.A.; Revs. J. Griffith, M.A.; J. D. Mosley, B.D., J. Allen, A.B., A. Creak, M.A., B. W. Harvey, W. Kelly, M.A., W. Porter; Messrs. W. King, M.D., W. Alger, J.P., W. R. Barrymore, T. Barnes, M.A., T. Barton, S. Bastick, P. Capon, C. Carpenter, J.P., A. Cobbett, A. Cox, T. H. Cross, B.A., S. Evershed, T. Page, W. H. Harper, H. E. Harris; E. H. Marshall, Dr. Lowe; Messrs. W. T. Loveday, A. Martin, H. Moor, W. Olding, T. Page, G. de Paris, J. Peto, F.R.A.S., M. Penley, W. W. Pyne, M. Ricardo, P. S. Rickards, W. D. Savage, J. H. Scott; Dr. White; Messrs. W. Slight, H. Treacher, and W. J. Williams; Messrs. Scott and Sleight, *Auditors;* T. W. Wonfor, *Treasurer*; and Barclay Phillips, 75, Lansdowne-place, Brighton, *Secretary*.

Bristol.—Rev. Canon Girdlestone, M.A., *Chairman;* Messrs. G. C. Ashmead, G. H. Bengough; Revs. T. Bowman, M.A., C. Brittan, M.A.; Mr. F. N. Budd, M.A.; Rev. J. Burder, M.A.; Messrs. I. A. Cooke, J. D. Corfe; Earl of Ducie; Mr. J. F. R. Daniel; Mr. P. H. Edlin; Very Rev. G. Elliott, D.D., Dean of Bristol; Sir A. H. Elton, Bart.; Mr. J. S. Fry, Rev. Professor Gotch, LL.D; Messrs. F. W. Griffin, Ph.D., J. S. Harford, F.S.A.; Rev. N. Haycroft, M.A.; Messrs. F. Hazeldine, B.A., M. D. Hill, C. T. Hudson, M.A., W. H. G. Langton, M.P., H. Brittan; Revs. A. Poole, M.A., J. Robertson, A.M.; D. Thomas, B.A.; Messrs. F. F. Tuckett, R. H. Webb; W. C. Seaton; Rev. J. R. Wreford, D.D.; Messrs. M. Whitwill, and F. W. Cross, *Secretary*.

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THE DWELLINGS OF THE LABOURING CLASSES IN BAVARIA.

The Society of Arts, desirous of extending to some parts of the Continent its inquiry into the statistics of Model Dwellings,* addressed, in 1863, to Dr. Von Hermann, a Privy Councillor and a member of the Bavarian Government, a request to be favoured with some account of what steps had been taken in that country towards the improvement of the dwellings of the labouring classes, and the Minister of the Interior sent out a form (consisting of a series of questions) to the Government officials in all the districts of that country. The principal points in these questions were—The name of the building; the name of the proprietor; the purpose for which the building was intended; whether plans had been published; the architect's name; the date of opening; the area covered; peculiarities of construction or internal arrangement; the materials used and their prices; the management and regulations; the rental of dwellings or apartments; the number of residents in the preceding year, and the nature of their employment; statistics of mortality and sickness; financial statement as to cost of land; price of the building and of its fittings; annual income for rent, and outlay for repairs, insurances, &c.; the repayment of debts incurred upon the building; the local influences, such as the employments of the neighbouring population and the price of labour; the number of rooms in each dwelling, their area and height, whether there are one or more stories; the sanitary arrangements; the precautions against damages, damp, &c.; rent of each house, as compared with that of ordinary dwellings in the neighbourhood; annual outlay for repairs, &c.

In consequence of this application a number of documents and plans were forwarded to the Council, the following *resumé* of which has been prepared by Mr. Gilbert Redgrave:—

The buildings described have mostly been erected by the owners of factories, for the accommodation of their workmen. In two or three cases, however, these dwellings belong to building societies, who have erected them rather from pecuniary than from philanthropic views. These buildings are invariably grouped either in rows or blocks, and offer no example of single or double cottages as in England; they have sprung up either in manufacturing or mining districts, and in towns where manufactures are carried on. In Munich, where no manufactures of any importance exist, all attempts which have hitherto been made on a speculative footing have failed, partly for that reason, and partly perhaps because the laws relating to mortgage enable the possessor of a moderate capital to obtain the requisite building funds without the interposition of any company.

* See the Special Report issued in April, 1864.

There is, however, in the suburbs of Munich a class of buildings unknown in England, parts of which may be bought by different families.

Bavarian manufacturers, finding, as a rule, that their workmen were badly lodged, and on that account unhealthy, and that the paucity of dwellings created a scarcity of workmen, have from time to time built, in the vicinity of their factories, blocks of dwellings generally offering different degrees of accommodation, and varying considerably as to rent. The reports prove that the construction of these dwellings has brought about the most favourable results. The workmen and their families have improved in health and appearance. Mortality and diseases of the chest, arising from their former ill-ventilated and badly-warmed cottages, have decreased, and a better feeling has sprung up among the men, leading to the formation of benefit societies, reading clubs, and the like.

Careful statistics are given of the outlay for the several buildings, the materials used, &c.* The rough average cost of a number of the buildings amounts to £106 6s., with a maximum of £136, and a minimum of £68 per dwelling. Many of the blocks contain from twelve to twenty families. The architect's name is rarely given, as the buildings were carried out under the superintendence of the master-workmen of the several crafts. Most of these blocks have been erected within the last few years, but one or two date as far back as the commencement of the present century. The area which each dwelling occupies varies considerably, ranging approximately from 700 to 1,000 square feet. Most of the tenements have yards, and sometimes small gardens. The houses are generally built of brick, though a few are of wood, and they are roofed with tiles or slates. Judging from the elevations which have been forwarded, some trouble has been taken to render their appearance ornamental. The dwellings are in many instances under the supervision of the proprietor or manufacturer, who causes a weekly or monthly inspection to be made by a superintendent appointed for this purpose. The buildings are, as has been stated, mainly inhabited by the work-people of the factories to which they are attached. The average number in a family seems to be seven. In houses of this class in towns the inmates are either small trades-men, mechanics, or the employés of railways, post-offices, &c. In a building of this kind in Nuremberg, eighteen families inhabit three blocks. There are seven artisans, seven labourers, and the remaining four are employés at the railway or the post-office. The wages of the artisans, among whom there are three joiners, two shoe-makers, one turner, and one locksmith, range from 16s. 8d. to 25s. weekly. The labourers earn from 11s. 8d. to 16s. 8d. weekly, and the men employed at the railway and post, from 50s. to 84s. per month. In another return from the town of Fürth, it is stated that among twelve families there are five joiners, two turners, three metal-workers, and two belt-makers. Many of the buildings have been so recently opened, that an estimate of the annual rate of mortality is impossible, but in one instance, among a manufacturing population of 600 workmen, there has been a daily average of only 2½ sick persons; and in Nuremberg, among 98 inhabitants of a building for workmen, only one death is recorded for the year 1863. As the land on which the buildings in question have been erected forms in most cases part of the grounds attached to the factory, no price of site is given, but in Nuremberg, where a building company had to buy land, the price paid varied from 1d. and 2d. to 7½d. per square foot. In Fürth the price paid appears to have been 2s. 7d. per square foot. In some places the manufacturers give the dwellings rent-free to their workpeople, and even make provision for them in case of sickness or old age, and for their widows in case of death. By way of example, the following paragraph is given from a report, sent from the district of Middle Franconia, referring to the metal manufactory at Hammer, established in the year 1490:—"The patriarchal relationship which these manufacturers have always held towards their men, and which still continues up to the present day, in spite of the complete change which modern times have brought in this respect, has so good an effect on the community, that, although the manufacturer pays an annual poor-rate of 90s., the authorities have never been called upon to relieve any workman employed in this factory. This is owing to the fact that the manufacturer maintains the workmen and their widows in sickness and old age." Workmen so treated are certainly favoured beyond most of their class.

When a rent for the lodging is required, it varies considerably with the accommodation afforded. A foreman pays from £5 to £10 per annum for a very good house or tenement; a workman with a family has a dwelling varying in rent from £2 to £6 per annum; and unmarried people pay from £1 to £2 10s. a year for one or two rooms. The rent is paid quarterly or yearly. The repairs, which cost about 1 per cent. on the capital, are defrayed by the proprietors. The population living in the country round these dwellings consists of farmers and their labourers. The latter earn from £4 5s. to £5 a-year with board and lodging, and the day labourers from 1s. 2d. to 1s. 8d. per diem. The workmen in the factories or mines are similarly paid. The adult men receive from 8s. 4d. to 25s. per week; the adult women, from 6s. 8d. to 8s. 4d.; and the boys, from 4s. 2d. to 5s.

The accommodation varies according to the class of workpeople for which it is designed. In towns we find workshops attached to the houses, and sometimes cellarage and roof space. A foreman may have a living room, a kitchen, two bedrooms, a cellar, and a loft; workmen and their families have a kitchen, a bedroom, and a loft or cellar; and single men, or factory girls, a single room. The sizes of the different rooms in these houses appear to be about the same as in model dwellings in England. The Bavarian manufacturers being aware how much cheaper it is to provide a given amount of accommodation in a high piled building than in one occupying a comparatively large area, have adopted the system of flats, repeating the same arrangement in many floors with a common staircase.

The buildings are inspected from time to time by the proprietor or his agent, and the inhabitants are bound down to certain rules, the infraction of which will expose them to penalties or dismissal. It may be interesting to quote a few of these rules, which are obtained from the report on the cotton factory at Kolbermoor:—"Rule 4. Every part of the house, both the bedrooms and the kitchen, must be thoroughly cleaned once a week, and the windows at least once a month. The pathway in front of the house, the steps at the entrance, and the staircase, must be cleaned every Wednesday and Saturday, and this work must be performed alternately by the dwellers in the upper and lower story. Rule 5. To guard against vermin the beds must be aired daily, and the straw mattress must be filled with fresh straw in the spring and autumn. Both for the sake of cleanliness and to guard against fire, the straw must not be used loose in the bed, but must be enclosed in a proper ticking. The bedding must not be laid on the floor, but must be placed on bedsteads, or at least on trestles. Rule 9. The little garden belonging to each dwelling must be kept in good order, and be well cared for. Gardens which are not properly cultivated, or are visibly uncared for, will be taken from the family to whom they belong, and will be made over to some one else. Rule 13. No inhabitant may keep beer in casks in the house, and no business may be carried on in the house without the special permission of the manager."

These four examples will serve to show how completely these lodgings are under the supervision of the manufac-

* The average price of materials in Bavaria appears to be as follows:—Bricks, 45s. per thousand; freestone, 4d. per foot cube at the quarry; tiles, 50s. per thousand; slates, 42s. per thousand; fir timber (rough), 10d. per foot cube.

turer. The remaining rules relate to lodgers not being members of the family, to the moral behaviour of the inmates, to quarrelsome families, and to the punishments for the infraction of rules, which consist, for a first offence, of a fine of 10d., and for a second, of dismissal from the house, and even, in bad cases, from the factory. In towns these buildings are under the supervision of the sanitary police, and are subjected by them to very stringent rules.

In most cases, when a rent is taken for the use of the dwellings, it is about equal to what would be charged for an ordinary dwelling in the neighbourhood, with, however, very inferior accommodation. The model dwellings, being supplied with good stoves and good means of ventilation, are a great inducement to the workmen to leave their former wretched homes, and consequently it appears that all the buildings, however recently they may have been opened, are fully inhabited. The great difficulty in planning sets of dwellings in several stories is to ensure privacy to each family; but it does not appear that the German manufacturers have in any instance adopted the external gallery system, which is one of the best expedients hitherto imagined for attaining that object. It is pleasing to see the friendly relations which exist in Germany between the families inhabiting the same house, resulting in clubs and savings banks of the same character as our benefit societies in England. The printed rules of several of these societies, which hav been sent over, might serve as specimens for such unedertakinings our own country.

Fine Arts.

Paris Annual Exhibition.—It appears that the report that there would be no exhibition of works of art next year in Paris, in consequence of the great international gathering to take place in 1867, is incorrect, and that the annual exhibition will take place in 1866 as usual. The reason given against any break in the chain is a good one, namely that, as works which have been seen previously in public will be admitted in 1867, there will not be room for an extraordinary number of new pictures. Another reason might also have been given, namely, that the system of art education in Paris produces such an undue number of artists—good, bad, and indifferent—numbers of young men, who would be more profitably occupied in other callings, being led to study art for years, only to find out at last that they have mistaken their vocation, by the lure of gratuitous or cheap art-education—that the number of works sent for exhibition increases every year. The total number received by the jury of the *salon*, to open on the 1st May this year, is said to amount to six thousand, a larger number than the managers have ever yet had to deal with. Speaking of the annual exhibition, it may be mentioned that M. Fleury, member of the Academy of the Beaux Arts, and director of the new school, has been selected from the list of the jury elected by the artists to preside over that body.

Exhibition of Fine Arts at Lyons.—This exhibition closed the other day, and the report of the results shows the great value of these local exhibitions in France. The value of the various works sold out of the exhibition, 129 in number, amounts to more than £3,214. Of these, three were purchased by the municipal authorities for the public gallery of Lyons, for eleven thousand francs (£440); sixty-two by the Société des Amis des Arts, by whom the exhibitions are arranged, for 30,960 francs (£1,238); these also will be, in a measure, public property; and the remaining sixty-four by private individuals for 37,905 francs (£1,516). This is a result of which Lyons may well be proud. When we reflect that there is scarcely an important town in France in which something of the kind does not exist, we cease to be surprised at the dissemination of the taste for art which pervades the country.

Historical Paintings in the Hôtel des Invalides.—M. Bénédict Masson has just completed the first of his works, in the great court of the Invalides, the "Epoch of Charlemagne," which is to be opened to visitors in the month of May. The wall is being prepared to receive the second of the series of illustrations of French history.

Decoration of the Berlin Gallery.—It is said that the painter Kaulbach has very nearly completed his labours for the decoration of the walls of the Musée. It is stated that the sums already paid to the artist for material outlay only amount to about £3,720.

Photographic Exhibition in Paris.—The Annual Exhibition of Photographs is appointed to take place in the same building and at the same time as that of the pictures and sculpture, namely, the first of May.

Manufactures.

Exhibition at Bordeaux.—An interesting exhibition is announced to take place at Bordeaux, to consist of the agricultural and industrial products of France, Spain, and Portugal. The undertaking is started by the Philomathic Society of the town, with the concurrence of the Chamber of Commerce, and the countenance and aid of the French, Spanish, and Portuguese Governments, the local authorities of the department, and the municipality of the town itself. The exhibition is to occupy an extensive building, now being raised for the purpose, on the Grande Place, one of the finest public promenades in France, and its doors are to be opened on the first of July. The management has an agent in Paris.

Indelible Ink.—One more contribution to the list of new and indestructible inks, real or supposed, comes from Germany. The recipe is as follows:—20 grains of sugar dissolved in 30 grains of water, and the addition to the solution of a few drops of concentrated sulphuric acid; the mixture is then heated, when the sugar is carbonized by the action of the acid. It is said that the writing is not only of a solid black colour, but that the acid resists the action of chemical agents.

A New American Silkworm.—It appears, from *Silliman's Journal*, that after numerous experiments, Mr. L. Trouvelot, of Medford, Mass., has succeeded in rearing successfully, and in great numbers, *Attacus Polyphemus* Linn., and in preparing from its cocoon an excellent quality of silk, possessing great lustre and strength, and pronounced superior to Japanese and all other silks, except the best Chinese, by competent judges. The silk is unwound by a simple process perfected by Mr. Trouvelot, each cocoon yielding about 1,500 yards. This insect is very hardy, being found throughout the Northern States and Canada; and, as it feeds upon the leaves of oak, maple, willow, and other common forest trees, may be reared easily in any part of the country. Mr. Trouvelot has gradually increased his stock from year to year, by raising young from the eggs of the few individuals first captured, until he has at present seven waggon-loads of cocoons, the entire progeny of which he proposes to raise during the coming season. The first public notice of his experiments with this insect was given by Mr. Trouvelot at a meeting of the Institute of Technology, at Boston, about a year ago, when he exhibited specimens of silk manufactured from it, both natural-coloured and dyed.

Commerce.

New Charts of the French Coast.—The Minister of Marine has presented a report, which has been approved by the Emperor, on the necessity of a complete revision of the charts of the French coast, and a re-publication of the *Pilote Français*. The charts now in use date from 1816 to 1838, and since that time great changes have

taken place in the coast line, as well as in the profile of the bottom. It is therefore determined that the whole shall be completely revised, and it is said that the work can be completed with the ordinary means at the disposition of the Director-General of Maritime Charts and Plans, without drawing upon any extraordinary resources whatever.

United Kingdom.—Statistics of the Paper Trade.—Quantities of paper (except hangings) imported and exported:—

Years.	Paper Imported.			Paper Exported.					
				British.			Foreign.		
	For printing or writing.	Other kinds (except hangings).	Total.	For printing or writing.	Other kinds (except hangings).	Total.	For printing or writing.	Other kinds (except hangings).	Total.
	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.
1862	115,927	73,505	189,432	93,190	36,136	129,326	9,800	3,508	13,308
1863	133,401	59,282	192,683	111,612	49,006	160,618	14,555	3,618	18,173
1864	153,054	89,553	242,607	116,071	51,734	167,805	23,452	4,986	28,438

Value of paper (except hangings) imported and exported, and quantities of rags imported and exported:—

Years.	Total Imports (except hangings).	Total Exports (except hangings).		Difference in favour of Exports.	Rags, &c., for Paper-making.	
		British.	Foreign.		Imported.	Exported British and Foreign.
	£	£	£	£	tons.	tons.
1862	420,948	441,103	31,509	51,664	23,942	4,715
1863	440,198	548,257	45,452	153,511	45,447	4,429
1864	522,447	550,092	not ascertained.	...	67,817	2,663

The foregoing figures go to prove that the British paper trade was not so greatly interfered with as was supposed would be the case, by foreign-made papers. Although the import of foreign-made papers has been steadily on the increase since the removal of the excise duty, the make and export of British papers have also largely increased. Instead of there being, as alleged, a deficiency in rags and other materials for making paper, the imports have more than doubled in the last three years, the increase being chiefly made up of exports, palm leaves and other vegetable fibres from the shores of the Mediterranean, which are found well suited for common printing papers.

Colonies.

Australian Union Benefit Society (Sydney).—From the last report it appears that the total number of members is 131; that the income of the past year was £346 16s. 4d. (of which £233 4s. 6d. was received as monthly contributions, and £113 11s. 10d. as interest), and the expenditure, comprising the medical officer's salary, sick allowances, printing, &c., amounted to £215 1s. 5d., leaving a balance in hand of £131 14s. 11d.; and that the society has the large sum of £1,785 10s. 2d. invested, bearing interest. These facts show that the society is in a prosperous state.

Port Adelaide.—The numbers of immigrants and emigrants at this port from the commencement of the year 1864 to the 14th December last, as shown by the official returns, are as follows:—Immigrants, 5,517; emigrants, 2,471; increase of immigration over emigration, 3,046. The above totals include the following, as shown in the classification adopted in the returns:—

Classes.	Immigrants.	Emigrants.
Adults, Males	2,985	1,446
„ Females	1,636	652
Children	896	373

Obituary.

John Cassell, the well-known publisher, expired at his residence in Avenue-road, Regent's-park, on Saturday, April 1st. Born in Manchester on the 23rd of January, 1817, he has died at the early age of forty-eight. Thrown in early life by the fortunes of his family among the working classes, he acquired a knowledge of their character and condition, which was the foundation of his future usefulness. He served a hard but salutary apprenticeship to manual labour, and so fitted himself to become the exponent of its wants and its claims. Realising the disadvantage of the defective education common to his class at the period of his early life, he was almost solely indebted to his own persevering exertions for the knowledge he acquired, and, in after years, so well applied. Seeing within the range of his own observation the evils accruing to the working classes from intemperance, he threw himself with all the zeal and energy of his youth into the temperance movement, which was about that time originated, and as an advocate of the cause he obtained a wide popularity, and exercised a powerful influence. Arriving at manhood, he successfully established himself in extensive commercial undertakings, and while in these pursuits his desire to benefit the classes whose educational needs he was so well acquainted with, induced him to commence, from philanthropic motives, the publication of those well-known works designed for the intellectual, social, and religious elevation of the people, and specially adapted for their requirements. These works, originating from a benevolent motive, soon formed the nucleus of what has become, in the hands of himself and his partners, Messrs. Petter and Galpin, a great publishing business. In private life he was much respected. Few men had so long a list of friends, and it included men of all ranks and conditions, by whom his friendship was considered a privilege, and from whom his gentle and noble qualities won respect and esteem.

Notes.

Mortality in France.—The Statistical Society of France has issued a statement which demands serious consideration, namely, that while the mortality of London at present surpasses the average of the last ten years, that of Paris has diminished from 31 in the thousand in 1845 to 25 in 1864. This is but a loose way of putting the case, as the general amelioration in the case of London is omitted, and only a bad year selected for the comparison. However, leaving out all question of London, it is very important to note that the rate of mortality in France has materially diminished. It appears that that of Paris fell from 3·12 per cent. in 1845 to 2·50 in 1862, and of Toulouse from 2·62 to 2·20 per cent., the last-named town exhibiting as low a mortality as the whole of France. The great towns stand in the following order with respect to mortality:—Rouen presents the highest rate, or 3·13 per cent.; then come Marseilles, Lille, Paris and Bordeaux equal, Lyon, Nantes, and Toulouse. The improvement during the period named has not been in the same ratio, but as follows:—Bordeaux exhibits a diminution of deaths to the extent of 0·89 per cent.; Lyons, 0·66; Marseilles, 0·63; Paris, 0·62; Lille, 0·50; Rouen, 0·47: Toulouse, 0·42; and Nantes, 0·32 per cent. only. One reason why Paris has not benefited in a more striking proportion still is the large influx of adults from the provinces, which naturally keep up the rate of mortality.

City Horticulture.—The Thames Embankment is already being made available for useful and ornamental purposes, for beyond the south-west corner of the Inner Temple gardens Mr. Broome is erecting a conservatory, now in a forward state of completion. These gardens will speedily possess a collection of beautiful green-house flowers on the very ground over which two months ago flowed the river.

Correspondence.

City Horticulture.—Sir,—When I introduced the subject of city horticulture to the Society of Arts, in my paper on the evening of March 29th, it was with a feeling that it was one of considerable dimensions, far beyond what I was capable of treating fully myself, and that probably the most valuable result of my remarks would be the calling out from others of observations which might be more practical as well as suggestive than my own. Now, although the general interest of the subject was illustrated by the unexpected delivery of a lecture in Westminster, on the same evening, on a branch of the same subject, Window Gardening, by Mr. Bosanquet, which doubtless took away many of those who might have been present at the Society of Arts, and have added their remarks to those given in the discussion, yet, as it was, several new facts and points of interest as well as results of practice were added, evidencing, I think, how many people are thinking on the same subject; and this is further illustrated by the letter of Mr. Bridges Adams, in last Friday's *Journal*, on "Town Gardens," which I have read with great interest. I quite accept the feasibility of his plan of flat roofing; at the same time, in this variable climate, and so high in the air as on the tops of houses, I conceive that a glass covering would be very advantageous, not only for the sake of protection from smoke and the draught, which Mr. Broome spoke of as so injurious in the Temple gardens, but that thereby an additional living or workroom of large dimensions is obtained. I have the pleasure of fully accepting the remarks of Mr. Adams as regards the beauty of Paris and that of London, and how that of the latter might be enhanced by the individual taste of its citizens; and it is for reasons like this that it is so advantageous to have the opportunity of bringing the subject before the public through the medium of the Society of Arts. It is very evident that, not only in London, but in most of the great and increasing towns of this country, this love of horticulture is rife and active, and that, separately and individually, many have been practising different points of it, without being aware of what others have been doing, and without interchange of ideas and experience. For instance, I for one was not at all prepared for the fact, as given by Mr. Broome, that within his own area of assistance there were no fewer than twenty-four floricultural societies in different parts of London, each numbering from 100 to 120 members, who held exhibitions twice a year. I dare say this was a new fact to most of those who were present that evening. This had direct reference to flower shows, which form a very pleasing department of the subject, and one which can doubtless be carried, especially by intercommunication, far beyond its present condition. But I need hardly say that the subject of City Horticulture is one that goes far beyond mere flower shows; it is one that finds sympathy in the heart of English people without show, as indeed the remarks made by Mr. Philip Palmer, Mr. Bailey Denton, Mr. George Wilson, Mr. Sowerby, Mr. Slack, Mr. Wentworth Scott, Mr. Broome, and Sir Thomas Phillips all tended to show. These few words have been called forth by those of Mr. Bridges Adams of last Friday, and I am glad to find in him a fellow-labourer in the same subject; but before I saw them I had written a few lines in reference to "Orchards in Cheapside," as alluded to by Mr. Wilson in the discussion, and which I hope I shall not be taking up too much space by asking you to append to these.—In the discussion on Wednesday evening last, Mr. George Wilson alluded to an article which appeared in one of the periodicals two or three years ago, in which the author recommended the growing fruit trees on the roofs of houses in the heart of London. Those interested in the subject of city horticulture would, I think, be glad to know the name of the periodical, and the date of the number which contained the article in question, and also whether the author had put in practice his suggestion, and if it was successful in the production of fruit. Leaves it is easy to produce. Flowers require an effort on the part of a plant, but fruit is the ultimate aim and success of its vitality. Mr. Slack's success was remarkable, in the production of such fine grapes in his glazed attic in Mount-street as he described on the same evening, and is most encouraging to those who, like myself, believe that the tops of houses in the metropolis and other large cities may be made pleasurable as well as useful, by one and the same means, that is by the use of glass instead of slate, and at no great increase of expense. An additional consideration may enter here, viz.: that by this means a portion of the enclosed contents of houses will be utilized, which often now are wasted, viz.: the pointed roofs, which are often shut off by a ceiling, and used for nothing, and are lost for any purpose, even that of ventilation; whereas, if used as suggested by Mr. Slack's experience, they would serve both for the purposes of ventilation and the growth of plants, flowers, and fruit trees. I confess also that I am anxious to hear what those who, in the habit of employing in numbers such artizans as require the best light for their work, may think of the construction of such fully-lighted and well-ventilated work-rooms in the elevated situations proposed, above the denser strata of London fog; and I venture to ask you to put this question in your journal, in the hope of eliciting practical opinions on this point. Light is also known to be productive of health in human beings as well as in plants, &c. I believe there are data showing that the shady sides of large buildings, containing a large number of occupants, are not so healthy as those which are towards the sun, and thus enjoy a larger portion of light. Also, to put an extreme case, an attic is a more healthy place to live in than a cellar, and this I apprehend does not rest only on the pure air of the former, but also on its greater degree of light. Where the young, as in the case of milliners, flower-makers, embroiderers, &c., are employed in sedentary occupation, how far more healthy would they be if working in well-ventilated, airy, well-lighted rooms, with flowers growing round them, than in stifling close rooms, where the air and occupation together are so apt to lead to consumption! It appears to me that arrangements of this kind are highly favoured by the cheap rate at which glass can be now obtained. At no other period of the history of the world and of architecture could glass be obtained so cheap. And it does not appear that we have as yet by any means fully utilized this important advantage of having at our easy and economic command a material pervious to light and impervious to weather.—I am, &c., John Bell.

MEETINGS FOR THE ENSUING WEEK.

Mon. ...Medical, 8.
Society of Engineers, 7. Mr. George King, "On Irrigation with Town Sewage."
Tues. ...Society of Arts, 8. Cantor Lectures. Dr. F. Crace Calvert, "On some of the Most Important Chemical Discoveries made within the last two years." (Lecture II.)
Civil Engineers. No Meeting on Easter Tuesday.
Statistical, 8. Mr. Hyde Clarke, "On the supposed Extinction of the Turks, and Increase of the Christians in Turkey."
Pathological, 8.
Anthropological, 8.
Wed. ...Society of Arts, 8. Mr. B. Waterhouse Hawkins, "On the Preservation of Natural History Specimens for Museum Purposes."
Meteorological, 7.
Microscopical, 8.
Thurs...Linnæan, 8. Mr. John Miers, F.R.S., "On *Gripidea*, a New Genus of *Lousaceæ*."
Chemical, 8.
Numismatic, 7.
Fri.....Philological, 8.
Sat.....R. Botanic, 3¾.

PARLIAMENTARY PAPERS.

SESSIONAL PRINTED PAPERS.

Par. Numb. *Delivered on 21st March*, 1865.

63. Bills—Locomotives on Roads.
75. „ Bank Notes Issue as amended in Committee).
78. „ Chemists and Druggists.
3 (278 and 279). Railway and Canal, &c., Bills—Board of Trade Reports, Parts 278 and 279.
107. East India (McDougall's Disinfecting Powder)—Despatch.
108. East India (Sanitary Commission)—Despatch.
134. Processions Act, &c. (Ireland)—Instructions.

Delivered on 22nd March, 1865.

79. Bills—Land Debentures (as amended by the Select Committee).
80. „ Land Debentures (Ireland) (as amended by the Select Committee).
83. „ Metropolitan Houseless Poor.
33. Metropolitan Board of Works—Report.
94. Opium—Return.
Schleswig, Holstein, and Lauenburg—Correspondence respecting Provisional Recognition of a Flag.
Discriminating Duties (France, Portugal, and Spain)—Correspondence.

Delivered on 23rd March, 1865.

81. Bill—Pilotage Order Confirmation (as amended by the Select Committee).
115. Navy (Crime and Punishment)—Report.
132. Park Lane and Piccadilly Thoroughfare—Correspondence.
138. Staplehurst Parish—Return.
139. Treasury Chest (1863-64)—Account.
141. Public House Closing Act—Returns.
143. Oats, Beef, and Mutton—Returns.
Charity Commission—Twelfth Report of Commissioners.

Delivered on 24th March, 1865.

84. Bills—Chemists and Druggists (No. 2).
85. „ Tests Abolition (Oxford).
90 (II). Civil Service Estimates (1865-66)—Class II.
135. Niger River—Correspondence.
142. Unity Bank—Correspondence.
148. Chelsea Bridge—Return.
149. Thames Embankment—Correspondence.

Delivered on 25th and 27th March, 1865.

59. Bills—County Voters Registration.
82. „ Drainage and Improvement of Lands (Ireland) Provisional Orders Confirmation.
86. „ Roman Catholic Oath.
88. „ Lahore Bishopric.
89. „ Inclosure.

Patents.

From Commissioners of Patents Journal, April 7th.

Grants of Provisional Protection.

Air, stoves for heating—650—R. Howson.
Aeriform fluids, obtaining motive power from—827—M. P. W. Boulton.
Almonds, machine for peeling—760—J. H. Wathew.
Antiseptic fluids, apparatus for treating timber with—734—S. B. Boulton.
Animal matter, preparing waste—893—W. M. Fuller.
Apatite, method of treating—3—M. R. Leverson.
Bells—3177—R. Wilson.
Beer, composition for clarifying—799—W. B. Coleman.
Bottles, protective labels for—853—W. Betts.
Brushes—764—J. Vero.
Candles, machines for cutting the tips of—674—J. L. Field.
Candles, treating fatty matters for the manufacture of—817—R. A. Brooman.
Canvas, method of treating, &c.—752—W. M. Williams.
Caustic liquor—629—T. Nicholson.
Chains, ornamental metallic—843—E. Wolverson.
Cloth, preparing—762—T. Kenyon, jun.
Coal, apparatus for the distillation of—796—W. M. Williams.
Compounds, preparing lubricating—867—W. West.
Cotton gins—851—W. Richardson.
Cotton, machines for preparing—756—T. Ogden.
Deep water, apparatus for paying out telegraph cables in—825—R. Tidman.
Designs, apparatus for indicating—815—D. Mackenzie.
Fire-arms, breech-loading—711—R. A. Brooman.
Fire-arms, breech-loading—772—J. T. Cook and J. T. Cook, jun.
Fruit, machinery for dressing—502—D. Barr.
Furnaces, apparatus for heating blast for—891—J. Player.
Gas, carburetting—596—W. R. Bowditch.
Grain, apparatus for thrashing—735—M. Meisel.
Hand power, apparatus for propelling carriages by—798—W. Lane.
Houses, apparatus for the protection of—619—C. F. Varley.
Human body, apparatus for measuring the—635—J. H. Wilson.
Hydrated oxide, preparation of—788—R. A. Brooman.
Iron and steel, refining—806—M. Morgans.
Iron safes—459—J. Fergusson.
Iron, machinery for working puddled balls of—779—W. Menelaus.
Japanned goods, ornamenting the surfaces of—831—T. Farmer and F. Lewis.
Knives, &c., hardening—747—H. Wethered.
Lace, manufacture of—716—J. Wilkie.
Lamp, atmospheric pressure—562—W. B. Dalston.
Light, apparatus for obtaining—841—G. F. Marchisio.
Lighting and heating, materials for—855—W. Clark.
Machinery, file cutting—885—W. Brookes.
Metals, machine for rolling—736—J. Ramsbottom.
Motive power—802—V. Baker.
Motive power engines—651—W. Clark.
Oars—161—E. D. Farcot.
Oil feeders—859—J. Buckingham.
Pasteboard, apparatus for cutting—789—W. Clark.
Pencil shield—746—C. A. Wheeler.
Piano, &c., proper action of the hands of players upon the—655—W. T. Hamilton.
Pins, fastenings for—881—I. L. Pulvermacher.
Potatoes, &c., implement for paring—857—C. Burfitt.
Railway trains, communication between passengers and guard of—839—J. C. Stovin.
Railways, permanent way of—738—W. Loeder.
Ranges, construction of kitchen—875—F. Thomas.
Reflectors—288—A. S. Stocker.
Roads, locomotive engine and carriages for common—780—A. R. Mackenzie.
Safes, locks for—778—S. Chatwood.
Scarves—773—M. Eley.
Screws, apparatus for cutting the threads of—835—J. Green.
Sea weed, preparation of—877—R. Young and C. F. O. Glassford.
Sewing machines—766—O. Robinson.
Sewing machinery—776—A. V. Newton.
Sewing machines—883—W. N. Wilson.
Sewers, &c., apparatus for ascertaining the state of—849—R. W Barnes.
Ships, cabin furniture for—829—C. Bevan.
Signals, working railway—740—R. Bell.
Spatter dashes, method of closing—658—E. Carchon.
Spindles, &c., apparatus for lubricating—782—J. W. Midgley.
Stamping, apparatus for—865—G. Bishop.
Steam, increasing the mechanical value of—748—B. Lawrence.
Steel, casting ingots of—861—C. J. L. Leffler.
Sulphurous acid, obtaining—729—A. P. Price.
Telegraph wires, posts for—749—G. Dibley and F. Braby.
Traction engines—863—J. Buckshaw and W. S. Underhill.
Turpentines, preparation of—670—J., E. G., and C. H. Freeman.
Ventilating blinds—879—H. W. King.
Vessels, compositions for coating—871—J. C. C. Halkett.
Vessels, machinery for the propulsion of—3179—J. and J. H. Fothergill.
Warps, apparatus for drying—889—R. Holroyd and J. H. Bolton.
Washing, machine for—837—J. A. Swanzy.
Weaving, looms for—845—J. Milton.
Weaving, looms for—750—J. Bullough.
Weighing machines—757—J. McConnell.
Wheel gearing—744—J. Standfield.
Wool, apparatus for combing—622—S. and W. Smith.
Wool, apparatus for washing—808—G. E. Donisthorpe.
Yarns, method of treating—490—J. Mallison.
Yarn, manufacture of—774—I. Philippsthal.
Yards, construction of ships'—873—T. Glover, jun.
Zinc, machine for cutting sheets of—662—R. G. Fisher.

Invention with Complete Specification Filed.

Iron rods, manufacture of—912—H. A. Bonneville.

Patents Sealed.

2487. J. Cassell.
2501. G. H. Reay.
2502. T. Adams & G. J. Parson.
2503. J. W. Nottingham.
2508. W. B. Haigh & S. Barlow.
2510. F. Wilkins.
2522. E. Moride.
2527. M. Henry.
2549. H. Mason.
2551. E. Baines.
2681. L. P. G. Bellet and C. M. P. de Rouvre.
157. C. D. Abel.
207. G. Haseltine.
389. T. A. & M. A. Verkruzen.

From Commissioners of Patents Journal, April 11th.

Patents on which the Stamp Duty of £50 has been Paid.

1008. S. Farron.
952. J. C. Kay and W. Hartley.
956. T. Silver.
972. W. Begg.
974. J. Colling.
975. A. Clark.
1040. J. T. Grice.
1052. J. Howard, E. T. Bousfield, and T. Phillips.
1097. J. Barbour.
1113. J. W. Ford.
1248. J. E. A. Gwynne.
1061. J. Park.
991. J. Brown.
1013. J. Jones, jun.
1014. J. Langston.
1027. C. P. Coles.
1007. J. E. H. Andrew.
1016. J. Knowelden.
1028. G. D. Mertens.
1029. L. Christoph, W. Hawksworth, & G. P. Harding.
1032. J. Petrie, jun.
1055. N. Nussey.
782. W. Rowett.

Patents on which the Stamp Duty of £100 has been Paid.

760. T. Greenwood, J. Batley, and J. Dockray.
787. S. Bickerton.
767. H. Bayley and J. Greaves.
782. W. Rowett.